ABSTRACT OF THE DISCLOSURE

An ultra-narrow band fluorine laser apparatus is provided in which a line width of a fluorine laser can be narrowed to about 0.2 to 0.3 pm without using any band-narrowing element such as an etalon. In an oscillator 11, a laser chamber 15 is provided in a stable type resonator constituted by an output mirror 13 and a totally reflecting mirror 14. The laser chamber 15 is filled with a laser gas at about 0.8 atm. As a result, when discharge is caused in the laser chamber 15 to cause laser oscillation, laser light L10 in a bandwidth of about 0.3 pm is provided. The power of the laser light L10 is increased by an amplifier 12. The amplifier 12 emits laser light L20 in a bandwidth of about 0.3 pm having laser energy of 10 mJ or more.